

CLAIMS

- [c1] 1. A method for operating a mobile reporting module to register with a monitoring facility via a wireless communications network, comprising operations of:
- the mobile reporting module determining whether or not wireless coverage is available via the wireless network;
 - if the coverage is determined to be available, the mobile reporting module transmitting a registration request at a first prearranged time;
 - if coverage is determined to be unavailable, the mobile reporting module refraining from transmitting the registration request; and
 - if the coverage availability is unable to be determined, the mobile reporting module transmitting a registration request at a second prearranged time.
- [c2] 2. The method of claim 1, wherein:
- the first prearranged time comprises an even minute past any hour; and
 - the second prearranged time comprises an odd minute past any hour.
- [c3] 3. The method of claim 1, the operations further comprising:
- responsive to receiving the registration request from the mobile reporting module, the monitoring facility determining whether the mobile reporting module determined coverage to be available by analyzing which of the first or second prearranged times the mobile reporting module transmitted the registration request.
- [c4] 4. The method of claim 3, wherein:
- the operation of the mobile reporting module transmitting registration requests further includes transmitting a time of transmission;
 - the operation of the monitoring facility analyzing which of the first or second prearranged times the mobile reporting module transmitted the registration request upon comprises reviewing the time of transmission.

[c5] 5. The method of claim 3, wherein:

the mobile reporting module and monitoring facility including separate time clocks, and the operations further comprise synchronizing the time clocks before the operation of the mobile reporting module attempting to determine whether wireless coverage is available via the wireless network;

the operation of the mobile module transmitting a registration request upon one of the first prearranged times comprises transmitting the registration request upon one of the first prearranged times as indicated by the time clock of the mobile reporting module;

the operation of the mobile module transmitting a registration request upon one of the second prearranged times comprises transmitting the registration request upon one of the first prearranged times as indicated by the time clock of the mobile reporting module;

the operation of the monitoring facility analyzing which of the first and second prearranged times the mobile reporting module transmitted the registration request upon comprises referencing a time of receipt of the registration request according to the time clock at the monitoring facility.

[c6] 6. The method of claim 1, the operation of the mobile reporting module attempting to determine whether wireless coverage is available via the wireless network comprising:

monitoring transmissions from the wireless communications network for a coverage code, and upon receipt of the coverage code, referencing a coverage record to determine whether the received coverage code indicates that wireless coverage is available.

[c7] 7. A data collection system, comprising:

a monitoring facility in communication with a wireless communications network and programmed to recognize received messages transmitted by the mobile reporting module at first prearranged times to mean that the mobile reporting module has deemed coverage by the network to be available, and to recognize received messages transmitted by the mobile reporting module at second prearranged times to mean that the mobile reporting module has deemed coverage by the network to be unknown;

one or more mobile reporting modules programmed to re-register with the monitoring facility via a wireless communications network by performing operations comprising:

determining whether or not wireless coverage is available via the wireless network;

if the coverage is determined to be available, transmitting a registration request upon one of the first prearranged times;

if coverage is determined to be unavailable, refraining from transmitting the registration request; and

if the coverage availability is unable to be determined, transmitting a registration request upon one of the second prearranged times.

[c8]

8. The system of claim 7, where:

the mobile reporting module includes a clock;

the first prearranged times comprise even minutes after hours indicated by the clock; and

the second prearranged times comprise odd minutes after hours indicated by the clock.

[c9]

9. The system of claim 7, where the monitoring facility is further programmed to perform operations comprising:

responsive to receiving the registration request from the mobile reporting module, the monitoring facility determining whether the mobile reporting module determined coverage to be available by analyzing which of the first or second prearranged times the mobile reporting module transmitted the registration request.

[c10]

10. The system of claim 7, where:

the mobile reporting module is programmed such that the operation of the mobile reporting module transmitting registration requests further includes transmitting a time of transmission;

the monitoring facility is programmed such that the operation of the monitoring facility analyzing which of the first or second prearranged times the mobile reporting module transmitted the registration request comprises analyzing the time of transmission.

[c11]

11. The system of claim 7, where:

the mobile reporting module and monitoring facility include separate, synchronized time clocks;

the mobile reporting module is programmed such that the operation of transmitting a registration request upon one of the first prearranged times comprises transmitting the registration

request upon one of the first prearranged times as indicated by the time clock of the mobile reporting module;

the mobile reporting module is programmed such that the operation of transmitting a registration request upon one of the second prearranged times comprises transmitting the registration request upon one of the first prearranged times as indicated by the time clock of the mobile reporting module;

the monitoring facility is programmed such that the operation of analyzing which of the first and second prearranged times the mobile reporting module transmitted the registration request upon comprises referencing a time of receipt of the registration request according to the time clock at the monitoring facility.

[c12] 12. The system of claim 7, the mobile reporting module being programmed such that the operation of attempting to determine whether wireless coverage is available via the wireless network comprises:

monitoring transmissions from the wireless communications network for a coverage code, and upon receipt of the coverage code, referencing a coverage code history record to determine whether the received coverage code indicates that wireless coverage is available.

[c13] 13. A data collection system, comprising:

monitoring means, in communication with a wireless communications network, for recognizing received messages transmitted by the mobile reporting module at first prearranged times to mean that the mobile reporting module has deemed coverage by the network to be available, and for recognizing received messages transmitted by the mobile reporting module at second prearranged times to mean that the mobile reporting module has deemed coverage by the network to be unknown;

mobile reporting means for registering with the monitoring means via a wireless communications network by;

determining whether wireless coverage is available via the wireless network;

if the coverage is determined to be available, transmitting a registration request upon one of the first prearranged times;

if coverage is determined to be unavailable, refraining from transmitting the registration request; and

990164

if the coverage availability is unable to be determined, transmitting a registration request upon one of the second prearranged times.